BRITISH JOURNAL OF HAEMATOLOGY

VOL. 88 NO. 1 SEPTEMBER 1994

Annotation

1 **Pathogenesis of idiopathic myelofibrosis: present status and future directions**
John T. Reilly

Research Papers

Haemopoiesis and growth factors

9 **Transforming growth factor-β and megakaryocytes in the pathogenesis of idiopathic myelofibrosis**
M. C. Martyré, N. Romquin, M. C. Le Bousse-Kerdiles, S. Chevillard, B. Benyahia, B. Dupriez, J. L. Demory and F. Bauters

17 **Tumour necrosis factor-α and interleukin 4 promote the differentiation of myeloma cell precursors in multiple myeloma**
Morio Sawamura, Hirokazu Murakami, Jun'ichi Tamura, Takafumi Matsushima, Sadao Sato, Takuji Naruse and Jun Tsuchiya

24 **CD45 isoform expression on human haemopoietic cells at different stages of development**
William Craig, Sibrand Poppema, Marie-Terese Little, Wieslawa Dragowska and Peter M. Lansdorp

31 **Myeloid haemopoietic cells of patients with chronic granulomatous disease are relatively resistant to TNF**
Akiko Sakashita, John T. Curnutte and H. Phillip Koeffler

39 **Reducing erythropoietin in cultures of human erythroid precursors elevates the proportion of fetal haemoglobin**
Eitan Fibach, Alan N. Schechter, Constance T. Noguchi and Griffen P. Rodgers

Lymphocytes and granulocytes

46 **Recovery of T-lymphocytes for adoptive immunotherapy by lymphapheresis of HIV-infected patients without alterations of virological, immunological or clinical parameters**
Jan van Lunzen, Jörn Schmitz, Kathrin Dengler, Lutz Schmidt, Herbert Schmitz and Manfred Dietrich

Red cells

52 **Erythrocyte membrane protein alterations underlying clinical heterogeneity in hereditary spherocytosis**
Emanuele Miraglia del Giudice, Achille Iolascon, Luciano Pinto, Bruno Nobili and Silverio Perrotta

56 **The effect of iron overload and iron reductive treatment on the serum concentration of carbohydrate-deficient transferrin**
P. D. Jensen, N. A. Peterslund, J. Hjelm Poulsen, F. T. Jensen, T. Christensen and J. Ellegaard

Bone marrow transplantation

64 **Human cytomegalovirus (HCMV) infection in paediatric patients given allogeneic bone marrow transplantation: role of early antiviral treatment for HCMV antigenaemia on patients' outcome**
Franco Locatelli, Elena Percivalle, Patrizia Comoli, Rita Maccario, Marco Zecca, Giovanna Giorgiani, Piero De Stefano and Giuseppe Gerna

72 **Treatment of advanced acute leukaemia with allogeneic bone marrow transplantation from unrelated donors**
Gary Schiller, Stephen A. Feig, Mary Territo, Maurice Wolin, Michael Lill, Tom Belin, Lynne Hunt, Stephen Nimer, Richard Champlin and James Gajewski

79 **Influence of donor lymphocytes on the incidence of primary graft failure after allogeneic bone marrow transplantation in a murine model**
Lutz Uharek, Bertram Glass, Tobias Gaska, Winfried Gassmann, Helmut Loeffler and Wolfgang Mueller-Ruchholtz

Malignancy

88 **Estimated 8-year survival of more than 40% in a population-based study of 79 adult patients with acute lymphoblastic leukaemia**
S. A. Evensen, L. Brinch, G. Tjønnfjord, P. Stavem and F. Wisløff

94 **Acute lymphocytic leukaemia in the elderly: characteristics and outcome with the vincristine–adriamycin–dexamethasone (VAD) regimen**
Hagop M. Kantarjian, Susan O'Brien, Terry Smith, Elihu H. Estey, Miloslav Beran, Alejandro Preti, Sherry Pierce and Michael J. Keating

101 **Unique immunophenotype of acute promyelocytic leukaemia as defined by CD9 and CD68 antibodies**
Wendy N. Erber, Heinke Asbahr, Simon A. Rule and Colin Stephen Scott

105 **The relationship between *bcl-2* expression and response to chemotherapy in acute leukaemia**
Z. T. Maung, F. R. MacLean, M. M. Reid, A. D. J. Pearson, S. J. Proctor, P. J. Hamilton and A. G. Hall

110 **Molecular detection of clonally rearranged cells in peripheral blood progenitor cell harvests from multiple myeloma patients**
J. M. Bird, D. Bloxham, Diana Samson, R. E. Marcus, N. H. Russell, S. M. Kelsey, A. C. Newland and J. F. Apperley

117 **Impact of response to treatment on survival in multiple myeloma: results in a series of 243 patients**
Joan Bladé, Armando Lopez-Guillermo, Francesc Bosch, Francisco Cervantes, Joan-Carles Reverter, Emilio Montserrat and Ciril Rozman

Haemostasis and thrombosis

122 **Efficient gene transfer into human umbilical vein endothelial cells allows functional analysis of the human tissue factor gene promoter**
Amit C. Nathwani, Karen M. Gale, Kieran D. Pemberton, David C. Crossman, Edward G. D. Tuddenham and John H. McVey

129 **A haemorrhagic platelet disorder associated with altered stimulus–response coupling and abnormal membrane phospholipid composition**
I. J. Cartwright, K. K. Hampton, S. Macneil, B. T. Colvin and F. E. Preston

137 **Influence of combined thrombin stimulation, surface activation, and receptor occupancy on organization of GPIb/IX receptors on human platelets**
James G. White, Marlys Krumwiede, Debra Cocking-Johnson and Gines Escolar

149 **Dissociation between the phospholipases C and A2 activities in stimulated platelets and their involvement in the arachidonic acid liberation**
Ahmad Faili, Sharareh Emadi, B. Boris Vargaftig and Mohamed Hatmi

156 **Factor IX Bm Kiryu: a Val-313-to-Asp substitution in the catalytic domain results in loss of function due to a conformational change of the surface loop: evidence obtained by chimaeric modelling**
Toshiyuki Miyata, Kuninori Kuze, Tomokazu Matsusue, Hitoshi Komooka, Kenshu Kamiya, Hideaki Umeyama, Akira Matsui, Hisao Kato and Akira Yoshioka

166 **Epitope mapping of human factor IX inhibitor antibodies**
Isao Takahashi, Shinichi Mizumo, Tadashi Kamiya, Junki Takamatsu and Hidehiko Saito

174 **Red blood cell aggregability in patients with a history of leg vein thrombosis: influence of post-thrombotic treatment**
Anne Chabanel, Marie Hélène Horellou, Jacqueline Conard and Meyer M. Samama

Blood transfusion

180 **Characterization of human blood group scFv antibodies derived from a V gene phage-display library**
N. C. Hughes-Jones, B. D. Gorick, J. M. Bye, R. Finnern, M. L. Scott, D. Voak, J. D. Marks and W. H. Ouwehand

187 **Detection of herpesvirus type 6 by polymerase chain reaction in blood donors: random tests and prospective longitudinal studies**
Freimut Wilborn, Christian Andreas Schmidt, Robert Zimmermann, Volker Brinkmann, Frank Neipel and Wolfgang Siegert

193 **PCR-based determination of Rhc and RhE status of fetuses at risk of Rhc and RhE haemolytic disease**
Caroline Le Van Kim, Isabelle Mouro, Yves Brossard, Jacques Chavinié, Jean Pierre Cartron and Yves Colin

Short Reports

196 **Acute myeloid leukaemia with +i(12p) shortly after treatment of mediastinal germ cell tumour** (Corrigenda, p. 898)
L. T. Vlasveld, T. A. W. Splinter, A. Hagemeijer, K. Van Lom and B. Löwenberg

199 **Predicting the severity of rhesus alloimmunization: monocyte-mediated chemiluminescence versus maternal anti-D antibody estimation**
A. G. S. Buggins, B. Thilaganathan, H. Hambley and K. H. Nicolaides

201 **Further evidence that activated protein C resistance can be misdiagnosed as inherited functional protein S deficiency**
P. C. Cooper, K. K. Hampton, M. Makris, A. Abuzenadah, B. Paul and F. E. Preston

204 **High-dose gamma-globulin therapy in the reactive haemophagocytic syndrome**
D. S. Gill, A. Spencer and R. G. Cobcroft

207 **Prenatal diagnosis of congenital dysgranulopoietic neutropenia**
A. Koren, H. Cohen, I. Shneyour and E. Shalev

209 **Immunoglobulin replacement in patients with chronic lymphocytic leukaemia: a comparison of two dose regimes**
H. Chapel, M. Dicato, H. Gamm, V. Brennan, F. Ries, C. Bunch and M. Lee

213 **Fluctuating symptomatic cryofibrinogenaemia in a patient with left atrial myxoma**
Ralph G. Cobcroft, Andrew Shearer, Devinder S. Gill and Jeffery Forgan-Smith

215 **Cyclic haemopoiesis at 7- or 8-day intervals**
Morio Sawamura, Sayuri Yamaguchi, Hirokazu Murakami, Tokuyuki Kitahara, Katsuhuko Itoh, Tadashi Maehara, Etsuo Kawada, Takafumi Matsushima, Jun'ichi Tamura, Takuji Naruse and Jun Tsuchiya

219 **High prevalence of a mutation in the factor V gene within the U.K. population: relationship to activated protein C resistance and familial thrombosis** (Corrigendum, p. 450)
Nicholas J. Beauchamp, Martina E. Daly, K. K. Hampton, Peter C. Cooper, F. Eric Preston and Ian R. Peake

Correspondence

223 **Considerations on the true value of the international normalized ratio in the control of oral anticoagulant therapy**
A. M. H. P. van den Besselaar, R. M. Bertina and L. Poller

225 **A mutation in the polyadenylation signal of the α_2 globin gene (AATAAA → AATA−−) as a cause of α thalassaemia in Asian Indians**
G. W. Hall, D. R. Higgs, P. Murphy, A. Villegas and A. de Miguel

228 **Book Review**

228 **Announcements**

VOL. 88 NO. 2 OCTOBER 1994

Annotation

299 **Acute lymphoblastic leukaemia in adults: the case for a strategic shift in study approach**
S. J. Proctor

Research Papers

Haemopoiesis and growth factors

234 **Established IL-2-dependent double-negative ($CD4^-CD8^-$) TCR$\alpha\beta$/$CD3^+$ ATL cells: induction of CD4 expression**
Yasuaki Yamada, Masatoshi Fujita, Haruhiko Suzuki, Sunao Atogami, Hisashi Sohda, Ken Murata, Kunihiro Tsukasaki, Saburo Momita, Tomoko Kohno, Takahiro Maeda, Tatsuro Joh, Shimeru Kamihira, Hiroshi Shiku and Masao Tomonaga

242 **The effects of IL-1 and IL-4 on the Epo-independent erythroid progenitor in polycythaemia vera**
J. Th. M. de Wolf, D. W. Hendriks, M. T. Esselink, M. R. Halie and E. Vellenga

247 **All-trans retinoic acid promotes a differential regulation of adhesion molecules on acute myeloid leukaemia blast cells**
R. Di Noto, E. M. Schiavone, F. Ferrara, C. Manzo, C. Lo Pardo and L. Del Vecchio

256 **Serum levels of granulocyte-colony stimulating factor (G-CSF) in bacterial and viral infections, and in atypical pneumonia**
Karlis Pauksen, Lena Elfman, Ann-Kristin Ulfgren and Per Venge

261 **Recombinant human immunodeficiency virus type-1 (HIV-1) Tat protein sequentially up-regulates IL-6 and TFG-β1 mRNA expression and protein synthesis in peripheral blood monocytes**
Davide Gibellini, Giorgio Zauli, Maria Carla Re, Daniela Milani, Giuliano Furlini, Elisabetta Caramelli, Silvano Capitani and Michele La Placa

268 **Interferon-alpha up-regulates bcl-2 expression and protects B-CLL cells from apoptosis *in vitro* and *in vivo***
A. P. Jewell, C. P. Worman, P. M. Lydyard, K. L. Yong, F. J. Giles and A. H. Goldstone

Lymphocytes and granulocytes

275 **Persistent polyclonal lymphocytosis with binucleated B lymphocytes: a genetic predisposition**
X. Troussard, F. Valensi, C. Debert, M. Maynadie, F. Schillinger, P. Bonnet, E. A. Macintyre and G. Flandrin

Red cells

281 **Aplastic anaemia following exposure to 3,4-methylenedioxymethamphetamine ('Ecstasy')**
J. C. W. Marsh, Z. H. Abboudi, F. M. Gibson, J. Scopes, S. Daly, D. F. O'Shaunnessy, A. S. J. Baughan and E. C. Gordon-Smith

286 **Serum erythropoietin and serum transferrin receptor levels in aplastic anaemia**
Hubert Schrezenmeier, Gudrun Noé, Aruna Raghavachar, Ivan N. Rich, Hermann Heimpel and Berhard Kubanek

295 **Red cell membrane protein abnormalities in hereditary spherocytosis in Brazil**
Sara T. O. Saad, Fernando F. Costa, Dilmara L. Vicentim, Tereza S. I. Salles and Patricia H. L. Pranke

300 **The differences in quantities of α2- and α1-globin gene variants in heterozygotes**
T. P. Molchanova, D. D. Pobedimskaya and T. H. J. Huisman

307 **A novel β-thalassaemia mutation in the 5′ untranslated region of the β-globin gene**
Aglaia Athanassiadou, Adamandia Papachatzopoulou, Nicholas Zoumbos, George M. Maniatis and Richard Gibbs

311 **γ-mRNA and Hb F levels in β-thalassaemia**
D. G. Efremov, A. J. Dimovski, E. Sukarova, G. Schilirò, N. Zisovski, G. D. Efremov, O. R. Burrone and T. H. J. Huisman

Gene transfer

318 **Retrovirus-mediated transfer of the multidrug resistance gene into human haemopoietic progenitor cells**
Francesco Bertolini, Lucia De Monte, Chiara Corsini, Lorenza Lazzari, Eleonora Lauri, Davide Soligo, Maureen Ward, Arthur Bank and Fabio Malavasi

325 **Retroviral-mediated gene transfer into human myeloma cells**
Bo Björkstrand, M. Siraç Dilber, C. I. Edvard Smith, Gösta Gahrton and Kleanthis G. Xanthopoulos

Malignancy

332 **Cytokine response to infection in patients with acute myelogenous leukaemia following intensive chemotherapy**
Helmut Ostermann, Markus Rothenburger, Rolf M. Mesters, Jürgen van de Loo and Jochen Kienast

338 **Sequential acquisition of trisomy 8 and N-*ras* mutation in acute myeloid leukaemia demonstrated by analysis of isolated leukaemic colonies**
Cathy M. Price, Christopher J. Marshall and Asad Bashey

343 **Translocation t(5;12)(q31–q33;p12–p13): a non-random translocation associated with a myeloid disorder with eosinophilia**
Laurence Baranger, Nathalie Szapiro, Jacques Gardias, Josette Hillion, Josette Derre, Sylvie Francois, Odile Blanchet, Marc Boasson and Roland Berger

348 **High expression of the multidrug resistance-associated protein (MRP) in chronic and prolymphocytic leukaemia**
Herman Burger, Kees Nooter, Pieter Sonneveld, Kyra E. Van Wingerden, Guido J. R. Zaman and Gerrit Stoter

357 **Distinct lysozyme content in different subtypes of acute myeloid leukaemic cells: an ultrastructural immunogold study**
Peretz Resnitzky and Dina Shaft

Haemostasis and thrombosis

364 **Platelet procoagulant complex assembly in a tissue factor-initiated system**
Dougald M. Monroe, Harold R. Roberts and Maureane Hoffman

372 **Ultrastructural localization of the small GTP-binding protein Rap1 in human platelets and megakaryocytes**
Gaëtan Berger, Rozenn Quarck, Danièle Tenza, Sylviane Levy-Toledano, Jean de Gunzburg and Elisabeth Martin Cramer

Rapid Paper

383 **Thrombin receptor expression and function in large granular lymphocyte proliferative disorders**
Gareth L. Howells, Marion Macey, Adele M. Murrell, Anthony R. Green, Michael A. Curtis and Stuart R. Stone

Short Reports

389 **Involvement of eosinophils in acute myeloid leukaemia with monosomy 7 demonstrated by fluorescence *in situ* hybridization**
Y. L. Kwong and L. C. Chan

392 **Hepatitis C virus infection in patients with non-Hodgkin's lymphoma**
Clodoveo Ferri, Francesco Caracciolo, Anna Linda Zignego, Luco La Civita, Monica Monti, Giovanni Longombardo, Francesco Lombardini, Francesco Greco, Enrico Capochiani, Alessandro Mazzoni, Cesare Mazzaro and Giampiero Pasero

395 **IgD monoclonal gammopathy with long-term follow-up**
Joan Bladé and Robert A. Kyle

397 **HCV RNA levels and HIV infection: evidence for a viral interaction in haemophilic patients**
Paul T. Telfer, David Brown, Helen Devereux, Christine A. Lee and Geoffrey M. DuSheiko

400 **Aplasia after donor lymphocyte infusion (DLI) for CML in relapse after sex-mismatched BMT: recovery of donor-type haemopoiesis predicted by non-isotopic *in situ* hybridization (ISH)**
B. Garicochea, F. van Rhee, A. Spencer, A. Chase, F. Lin, N. C. P. Cross and J. M. Goldman

403 **Infection of donor lymphocytes with human T lymphotrophic virus type 1 (HTLV-I) following allogeneic bone marrow transplantation for HTLV-I positive adult T-cell leukaemia**
Per Ljungman, Mark Lawler, Birgitta Åsjö, Gordana Bogdanovic, Karin Karlsson, Claes Malm, Shaun R. McCann, Olle Ringdén and Gösta Gahrton

406 **Long-term culture and molecular biological studies highlight differences in relative BCR-ABL expression levels in the peripheral blood and bone marrow of a patient with chronic granulocytic leukaemia**
M. A. Smith, K. I. Mills and J. G. Smith

409 **Complement receptor type 1 (CR1) deficiency on neutrophils in myelodysplastic syndrome**
Akimichi Ohsaka, Katsu Saionji, Norimichi Watanabe, Hironao Yokomichi, Yuichi Sugahara, Reizo Nagayama and Jun Igari

413 **Location and PCR-based detection of three polymorphisms of the human erythrocyte β-spectrin gene (SPTB)**
Patrick G. Gallagher, Marie-Christine Lecomte, Colette Galand, Yong-Ping Wang, William T. Tse and Bernard G. Forget

415 **Over-expression of the MDM_2 gene is found in some cases of haematological malignancies**
Bruno Quesnel, Claude Preudhomme, David Oscier, Pascale Lepelley, Maud Collyn-d'Hooghe, Thierry Facon, Marc Zandecki and Pierre Fenaux

419 **CD30-positive lymphoma in human T-cell leukaemia virus type 1 carrier without monoclonal integration of HTLV-1**
Mitsuo Hori, Shouichi Mitsuhashi, Toshitaka Kobayashi, Toshiro Nagasawa, Naoyoshi Mori, Masanao Miwa and Tsukasa Abe

421 **Cytosine arabinoside (Ara-C) plus alpha-interferon (αIFN) determine prolonged complete remissions in patients with aggressive non-Hodgkin's lymphoma partially responsive to first-line doxorubicin-containing regimens**
Giovannella Palmieri, Alessandro Morabito, Antonio Rea, Michele Caraglia, Pierosandro Tagliaferri and Angelo Raffaele Bianco

424 **β_2 glycoprotein-I antigen is increased in primary hyperlipidaemia**
T. McNally, M. Crook, I. J. Mackie, D. A. Isenberg and S. J. Machin

427 **PML-RARα PCR positivity in the bone marrow of patients with APL precedes haematological relapse by 2–3 months**
L. Korninger, P. Knöbl, K. Laczika, S. Mustafa, P. Quehenberger, I. Schwarzinger, K. Lechner, U. Jaeger and C. Mannhalter

432 **Management of pregnancy when maternal blood has a very high level of fetal haemoglobin**
Jaspal S. Kaeda, Keshava Prasad, Richard J. Howard, Atul Mehta, Thomas Vulliamy and Lucio Luzzatto

435 **Chronic granulocytic leukaemia presenting with an extramedullary T lymphoblastic crisis**
A. Jacob, D. C. Rowlands, N. Patton and J. A. Holmes

437 **A deletional frameshift mutation in spectrin β-gene associated with hereditary elliptocytosis in spectrin Napoli**
R. Wilmotte, E. Miraglia del Giudice, J. Marechal, S. Perrotta, D. de Mattia, J. Delaunay and A. Iolascon

440 **The kinetics of colony formation by CFU-GM *in vitro***
J. L. Lewis, N. M. Blackett and M. Y. Gordon

Correspondence

443 **Measurement of MCV**
Brian S. Bull, James C. Westengard, George Brecher and T. M. Mayhew

445 **Neuroblastoma rosettes in aspirated bone marrow**
S. R. Smith and M. M. Reid

448 **Book Reviews**

450 **Corrigendum**

VOL. 88 NO. 3 NOVEMBER 1994

Annotations

451 **Homologous blood transfusion: the risks and alternatives**
Lorna Williamson

459 **The clinical value of detecting gene rearrangements in acute leukaemias**
G. J. Morgan, C. Shiach and M. Potter

Research Papers

Haemopoiesis and growth factors

465 **Short-term myeloid growth factor mediated expansion of bone marrow haemopoiesis studied by localized magnetic resonance proton spectroscopy**
Karl Erik Jensen, Per Boye Hansen, Vibeke Andreè Larsen, Hans E. Johnsen, Helle Nielsen, Hans Karle and Ole Henriksen

472 **Haemopoietic colony-forming cells from peripheral blood stem cell harvests: cytokine requirements and lineage potential**
P. Baines, L. Truran, R. Bailey-Wood, T. Hoy, H. Lake, C. H. Poynton and A. Burnett

481 **Interleukin-3 is an autocrine growth factor of human megakaryoblasts, the DAMI and MEG-01 cells**
Yuan Zhong Chen, Xue Fan Gu, Jacques P. Caen and Zhong Chao Han

488 **Haemopoiesis of transplanted patients with autologous marrows assessed by long-term marrow culture**
J. Domenech, E. Gihana, A. Dayan, D. Truglio, C. Linassier, I. Desbois, J. P. Lamagnere, P. Colombat and C. Binet

497 **Polycythaemia vera. IV. Specific binding of stem cell factor to normal and polycythaemia vera highly purified erythroid progenitor cells**
Chun-Hua Dai, Sanford B. Krantz, Stephen T. Koury and Kathleen Kollar

Leucocytes

506 **Changes in light-scatter profile, membrane depolarization and calcium mobilization of neutrophils induced by G-CSF *in vivo***
Karsten Spiekermann, Andreas Emmendoerffer, Jörn Elsner, Evelin Raeder, M.-L. Lohmann-Matthes, Karl Welte and Joachim Roesler

515 **Interleukin-3 administration enhances human monocyte function *in vivo***
Asim Khwaja, Ian E. Addison, Beryl Johnson, Kwee Yong and David C. Linch

520 **Impaired TCR signal transduction, but normal antigen presentation, in a patient with common variable immunodeficiency**
Michael B. Fischer, Ilona Hauber, Hermann M. Wolf, Erich Vogel, Josef W. Mannhalter and Martha M. Eibl

Erythrocytes

527 **A novel mutation in the erythrocyte protein 4.2 gene of Japanese patients with hereditary spherocytosis (protein $4.2^{Fukuoka}$)**
Yutaka Takaoka, Hiroshi Ideguchi, Miho Matsuda, Norihiro Sakamoto, Takayuki Takeuchi and Yasuyuki Fukumaki

534 **A variant of spectrin low-expression allel α^{LELY} carrying a hereditary elliptocytosis mutation in codon 28**
J. Randon, L. Boulanger, J. Marechal, M. Garbarz, A. Vallier, L. Ribeiro, G. Tamagnini, D. Dhermy and J. Delaunay

541 **RNA transcripts of the β-thalassaemia allele IVS-2-654 C → T: a small amount of normally processed β-globin mRNA is still produced from the mutant gene**
Shu-zhen Huang, Fan-yi Zeng, Zhao-rui Ren, Zhi-hong Lu, Griffin P. Rodgers, Alan N. Schechter and Yi-tao Zeng

547 ***In vivo* metabolic studies of glucose, ATP and 2,3-DPG in β-thalassaemia intermendia, heterozygous β-thalasseamic and normal erythrocytes: ^{13}C and ^{31}P MRS studies**
Y. L. T. Ting, S. Naccarato, A. Qualtieri, G. Chidichimo and C. Brancati

555 **Isobutyramide, an orally bioavailable butyrate analogue, stimulates fetal globin gene expression *in vitro* and *in vivo***
Susan P. Perrine, George H. Dover, Pratibha Daftari, Carol T. Walsh, YuXin Jin, Abbie Mays and Douglas V. Faller

562 **Homozygous β-thalassaemia resulting in the β-thalassaemia carrier state phenotype**
Maris Cristina Rosatelli, Alessandra Pischedda, Alessandra Meloni, Luisella Saba, Anna Pomo, Maurizio Travi, Silvia Fattore and Antonio Cao

Malignancy

566 **Development of extended multidrug resistance in HL60 promyelocytic leukaemia cells**
Gloria M. I. Su, Mary W. Davey, Ross A. Davey and Antony D. Kidman

575 **Karyotypic and ras gene mutational analysis in idiopathic myelofibrosis**
J. T. Reilly, G. Wilson, D. Barnett, A. Watmore and A. Potter

Haemostasis and thrombosis

582 **Purification and characterization of human platelet von Willebrand factor**
Sybil B. Williams, Laurie P. McKeown, Henry Krutzsch, Kristin Hansmann and Harvey R. Gralnick

592 **Thrombin binding to platelets and their activation in plasma**
Longbin Liu, John Freedman, Adriana Hornstein, John W. Fenton II and Frederick A. Ofosu

601 **Factor VIII, ABO blood group and the incidence of ischaemic heart disease**
T. W. Meade, J. A. Cooper, Y. Stirling, D. J. Howarth, V. Ruddock and G. J. Miller

608 **Fraxiparin, a low-molecular-weight heparin, stimulates megakaryocytopoiesis *in vitro* and *in vivo* in mice**
Z. X. Shen, N. Basara, X. D. Xi, J. Caen, J. P. Maffrand, M. Pascal, M. Petitou, J. C. Lormeau and Z. C. Han

Short Reports

613 **Possible misdiagnosis using the Xba I polymorphism for prenatal diagnosis of haemophilia A**
Neil S. Van de Water, Stephen J. May and Peter J. Browett

615 **Reactivation of antibodies of donor and recipient origin to platelet antigens early after allogeneic bone marrow transplantation: a case report**
Dorothee Wernet, Hinnak Northoff and Martina Schnaidt

618 **Treatment of chronic childhood immune thrombocytopenic purpura with intramuscular anti-D immunoglobulins**
Caterina Borgna-Pignatti, Laura Battisti, Marco Zecca and Franco Locatelli

621 **A spontaneous remission of lymphoid blast crisis in chronic myelogenous leukaemia following blood transfusion and infection**
Francois Lefrere, Olivier Hermine, Isabelle Radford-Weiss, Agnes Veil, Francoise Picard, Francois Dreyfus, Georges Flandrin and Bruno Varet

623 **Recombinant human erythropoietin may correct erythropoietin-deficient hyporegenerative anaemia in children given cardiac transplantation**
Franco Locatelli, Marco Zecca, Filippo Mamprin, Amando Gamba, Giovanna Giorgiani and Piero De Stefano

626 **Ultrasound examination of pathological cervical lymph nodes in patients with non-Hodgkin's lymphoma and Hodgkin's disease**
C. J. H. Gerrits, H. van Overhagen, K. van Lom, H. J. Adriaansen and B. Löwenberg

629 **A biclonal large granular lymphocyte (LGL)/NK-associated (NKa) disorder of $CD4^+$ and $CD8^+$ lymphocyte subpopulations characterized by the simultaneous presence of distinct TCR rearrangements**
Stephen J. Richards, Michael Short, Andrew J. Steed and Colin Stephen Scott

633 **Use of G-CSF alone to mobilize peripheral blood stem cells for collection from children**
J. Kanold, Ch. Rapatel, M. Berger, J. Chassagne, P. Lutz, L. de Lumley, D. Plantaz, J. P. Vannier, G. Malpuech and F. Deméocq

636 **Epstein-Barr virus in familial Hodgkin's disease**
Daniel Schlaifer, Françoise Rigal-Huguet, Alain Robert, Michel Attal, Michel Abbal, Yvette Fonck, Guy Laurent, Jacques Pris, Georges Delsol and Pierre Brousset

639 **Kinetics of serum cytokines in adults undergoing peripheral blood progenitor cell transplantation**
Hitoji Uchiyama, Chihiro Shimazaki, Naohisa Fujita, Tetsuya Tatsumi, Noboru Yamagata, Toshiyuki Hirata, Eishi Ashihara, Naritoshi Oku, Hideo Goto, Tohru Inaba, Harue Haruyama and Masao Nakagawa

643 **The role of CD45RO in antithymocyte globulin's stimulation of primitive haemopoietic cells**
Andrew T. Huang and Nelda G. Mold

647 **Successful treatment of essential thrombocythaemia and recurrent abortion with alpha interferon**
Jonathan M. Williams, Peter E. Schlesinger and Atherton G. Gray

649 **Transfusion-associated graft-versus-host disease in fludarabine-treated B-chronic lymphocytic leukaemia**
Z. T. Maung, A. C. Wood, G. H. Jackson, G. E. Turner, A. L. Appleton and P. J. Hamilton

653 **First report of fludarabine in gamma-heavy chain disease**
Samir Agrawal, Zaid Abboudi, Estella Matutes and Daniel Catovsky

656 **Haemophagocytic lymphohistiocytosis, interferon-gamma-naemia and Epstein-Barr virus involvement**
Shinsaku Imashuku, Shigeyoshi Hibi, Fumihiro Fujiwara, Satoshi Ikushima and Shinjiro Todo

659 **Human platelet antigen-5 (Br) genotyping by ASPA: allele-specific primer amplification (PCR-SSP)** (Corrigenda, p. 898)
S. Simsek, P. M. M. Bleeker, J. Heeremans and A. E. G. Kr. von dem Borne

Correspondence

662 **Erythropoietin treatment and platelet reconstitution in bone marrow transplantation**
J. L. Steegman, F. Casado, J. López and J. M. Fernández-Rañada

663 **Respiratory burst activity in MDS and MPS patients**
Andreas Neubauer and Edison Liu

664 **Primary cause of megaloblastic anaemia in Zimbabwe**
Zivanai C. Chapanduka, Vincent L. Naicker, D. Gayle Kenoyer and Vinod B. Jogessar

665 **Book Reviews**

666 **Announcements**

VOL. 88 NO. 4 **DECEMBER 1994**

Annotations

667 **Multiple myeloma: why does the disease escape from plateau phase?**
Douglas E. Joshua, Ross D. Brown and John Gibson

672 **Evolving strategies for the treatment of myelomatosis**
J. A. Child

Research Papers

Haemopoiesis and growth factors

679 **A flow cytometric assay of CD34-positive cell populations in the bone marrow**
M. Syrjälä, T. Ruutu and S.-E. Jansson

685 **Dysplastic haemopoiesis following orthotopic liver transplantation: comparison with similar changes in HIV infection and primary myelodysplasia**
Richard J. Clatch, Hannah R. Krigman, Marion G. Peters and Mary M. Zutter

693 **Protective effect of granulocyte-colony stimulating factor against amphotericin B-induced myelosuppression *in vivo***
Bishan S. Charak, Ernest G. Brown and Amitabha Mazumder

699 **Effects of rhG-CSF, 5-fluorouracil and extramedullary irradiation on murine megakaryocytopoiesis *in vivo***
Stefan Scheding, Joseph E. Media, Michael Kraut, Manuel Valdivieso and Alexander Nakeff

706 **Haemoglobin inhibits GTP-hydrolysis and GDP/GTP-exchange activities of a low M_r GTP-binding protein, *ras* p21**
Koh-Ichi Nagata and Yoshinori Nozawa

Leucocytes

712 **Human resident peritoneal macrophages: phenotype and biology**
A. Eischen, B. Duclos, M. Schmitt-Goguel, N. Rouyer, J. P. Bergerat, M. Hummel, R. Oskam and Fr. Oberling

723 **Long-term safety of treatment with recombinant human granulocyte colony-stimulating factor (r-metHuG-CSF) in patients with severe congenital neutropenias**
Mary Ann Bonilla, David Dale, Cornelia Zeidler, Linda Last, Alfred Reiter, Mary Ruggeiro, Mark Davis, Barbara Koci, William Hammond, Alfred Gillio and Karl Welte

731 **Haemophagocytic lymphohistiocytosis: experience at two U.K. centres**
W. J. R. Hirst, D. M. Layton, S. Singh, G. Mieli-Vergani, J. M. Chessells, S. Strobel and J. Pritchard

Erythrocytes

740 **A luminescence method for the quantitative determination of phagocytosis of erythrocytes, of malaria-parasitized erythrocytes and of malarial pigment**
Evelin Schwarzer, Franco Turrini and Paolo Arese

Iron

746 **The endocytic pathway for H-ferritin established in live MOLT-4 cells by laser scanning confocal microscopy**
Dean Moss, Alan R. Hibbs, Deborah Stenzel, Lawrie W. Powell and June W. Halliday

Malignancy

754 **Primary plasma cell leukaemia**
Meletios A. Dimopoulos, Antonio Palumbo, Kay B. Delasalle and Raymond Alexanian

760 **Expression and functional role of c-kit ligand (SCF) in human multiple myeloma cells**
Roberto M. Lemoli, Alessandra Fortuna, Alexis Grande, Barbara Gamberi, Laura Bonsi, Miriam Fogli, Marilina Amabile, Michele Cavo, Sergio Ferrari and Sante Tura

770 **Prognostic value of serum IL-10 and soluble IL-2 receptor levels in aggressive non-Hodgkin's lymphoma**
Roberto Stasi, Pier Luigi Zinzani, Piero Galieni, Vito Michele Lauta, Eugenio Damasio, Egidio Dispensa, Franco Dammacco, Giuseppe Papa and Sante Tura

778 **Metaphase fluorescence *in situ* hybridization (FISH) in the follow-up of 60 patients with haemopoietic malignancies**
Stella J. Nylund, Tapani Ruutu, Ulla Saarinen and Sakari Knuutila

784 **Minimally differentiated acute myeloid leukaemia (AML-M0): cytochemical, immunophenotypic and cytogenetic analysis of 19 cases**
Adriano Venditti, Giovanni Del Poeta, Roberto Stasi, Mario Masi, Antonio Bruno, Francesco Buccisano, Cristina Cox, Ugo Coppetelli, Germano Aronica, Maria Domenica Simone, Giuseppe Papa, Maurizio Tribalto and Sergio Amadori

794 **Molecular analysis of the erythropoietin receptor system in patients with polycythaemia vera**
Georg Hess, Petra Rose, Heinold Gamm, Stefan Papadileris, Christoph Huber and Barbara Seliger

Haemostasis and thrombosis

803 **Pentosan-induced thrombocytopenia: support for an immune complex mechanism**
Kathryn E. Goad, McDonald K. Horne, III and Harvey R. Gralnick

809 **Cyclic thrombocytopenia associated with IgM anti-GPIIb–IIIa autoantibodies**
Satoru Kosugi, Yoshiaki Tomiyama, Masamichi Shiraga, Hirokazu Kashiwagi, Hirohisa Nakao, Yoshio Nanayama, Yoshiyuki Kurata and Yuji Matsuzawa

816 **Anti-CD36 antibodies in thrombotic thrombocytopenic purpura**
Narenda N. Tandon, G. Rock and G. A. Jamieson

826 **Role of ADP in platelet aggregation at high shear: studies in a patient with congenital defect of platelet responses to ADP**
Marco Cattaneo, Maddalena L. Zighetti, Rossana Lombardi and Pier Mannuccio Mannucci

830 **Platelet shape change and Ca^{2+} mobilization induced by collagen, but not thrombin or ADP, are inhibited by phenylarsine oxide**
Dale E. Greenwalt and Narendra N. Tandon

839 **Cys209 Ser mutation in the platelet membrane glycoprotein Ibα gene is associated with Bernard-Soulier syndrome**
S. Simsek, P. Noris, M. Lozano, M. Pico, A. E. G. Kr. von dem Borne, A. Ribera and D. Gallardo

845 **The development of antiphospholipid antibodies in haemophilia is linked to infection with hepatitis C**
A. Al-Saeed, M. Makris, R. G. Malia, F. E. Preston and M. Greaves

849 **Biological effect of desmopressin in eight patients with type 2N ('Normandy') von Willebrand disease**
Claudine Mazurier, Christine Gaucher, Sylvie Jorieux and Maurice Goudemand

855 **Isolation and culture of endothelial cells from human bone marrow**
Lisa C. Masek and John W. Sweetenhan

866 **The reliability of the mean normal prothrombin time of fresh plasmas and of the normal value from a lyophilized 'normal' plasma in prothrombin ratio determination**
L. Poller, D. Houghton and J. Carroll

Rapid Paper

874 ***In vitro* culture of colony forming unit-megakaryocyte (CFU-MK) in fetal alloimmune thrombocytopenia**

Short Reports

878 **Anti-CD36 antibodies in patients with lupus anticoagulant and thrombotic complications**
G. Rock, K. Chauhan, G. A. Jamieson and Narendra N. Tandon

881 **Novel small deletions of the p53 gene in late-stage B-cell chronic lymphocytic leukaemia**
D. Gandini, G. L. Aguiari, A. Cuneo, R. Piva, G. L. Castoldi and L. del Senno

886 **Correlation between disease activity and T-cell CD3ζ chain expression in a B-cell lymphoma**
Massimo Massaia, Carmela Attisano, Eloise Beggiato, Alberto Bianchi and Alessandro Pileri

889 **Intragenic dinucleotide repeats in factor VIII gene for the diagnosis of haemophilia A**
B. Yip, Vivian Chan and T. K. Chan

892 **A distinct coagulopathy associated with Interleukin-2 therapy**
Leslie Oleksowicz, Margery Strack, Janice P. Dutcher, Ira Sussman, Geralyn Caliendo, Joseph Sparano and Peter H. Wiernik

Correspondence

895 **Lack of evidence for parvovirus B19 viraemia in children with chronic neutropenia**
Kip R. Hartman, Kevin E. Brown, Spencer W. Green, Neal S. Young, Kenneth McClain and Donald H. Mahoney, Jr

896 **Establishing the incidence of myelodysplasia syndrome**
Malcolm J. Phillips, Gavin M. Cull and Maeve Ewings

897 **Expression of myeloid antigens in acute lymphoblastic leukaemia**
M. R. Howard and M. M. Reid

898 **Corrigenda**

898 **Announcement**

899 **Author and Keyword Indexes to Volume 88**